

MONITOR WELL PRE-SPUD PROPOSAL

Pat PM
Peter AS
Ray RLS

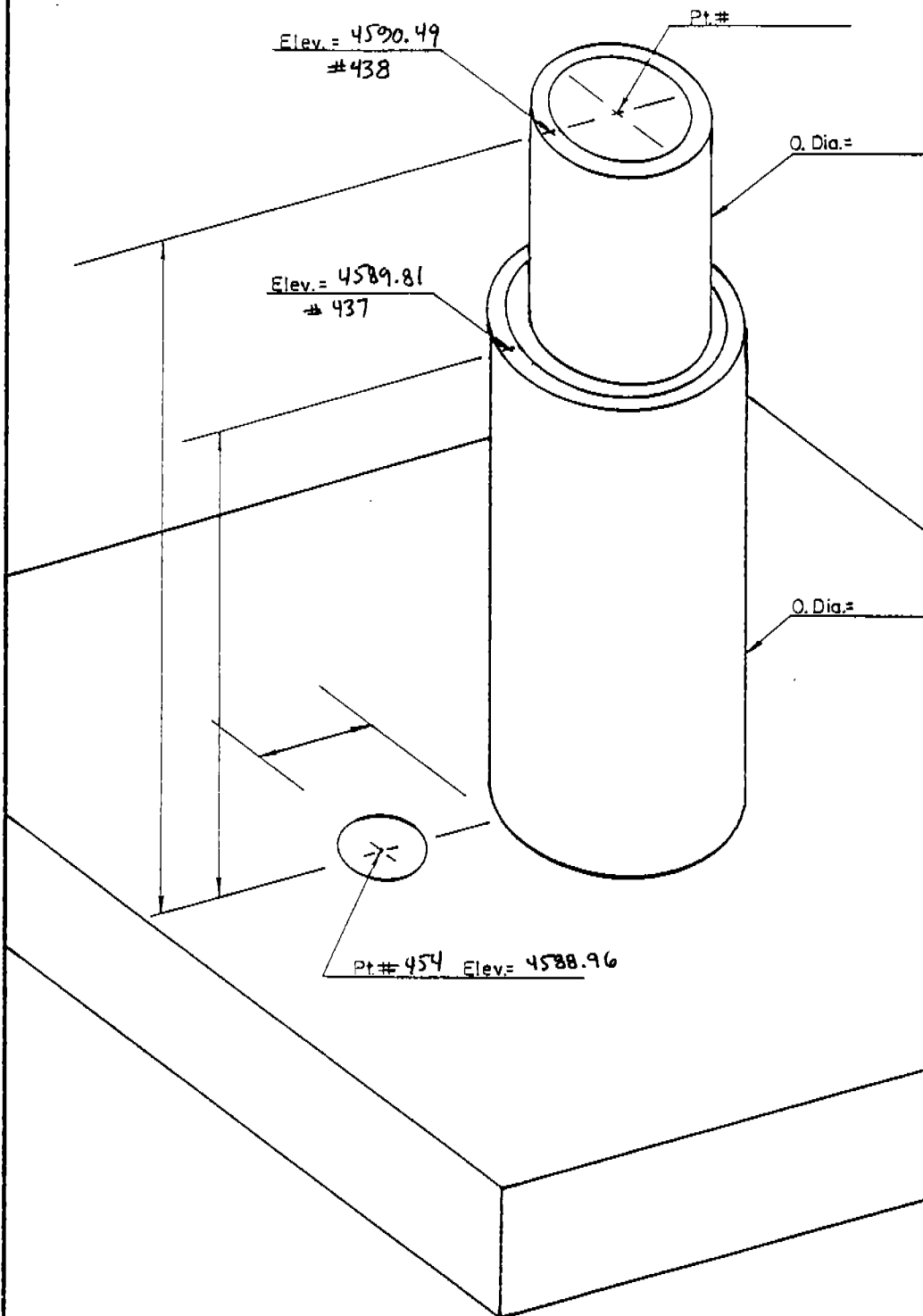
- 1) WELL NAME/NUMBER BLM-23
- 2) PROPOSED LOCATION: (a) General (on or off-site) Off-site
(attach map Site Area BLM Land)
(b) Sect 4 Twnshp 21S Rng 3E SW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$
- 3) WELL PARAMETERS:
 - (a) Est. total depth 500 (ft) (b) Est. ground elevation @4588 ft
 - (c) Anticipated stratigraphy:
Alluvium (Santa Fe Group) from 0 ' to 345 ' (depth)
Ash-flow Tuff from 345 ' to TD ' (depth)
 - (d) Anticipated water bearing horizon(s):
Ash-flow Tuff at 470 ' (depth)
at _____ ' (depth)
 - (e) Anticipated static water level 370 ' (depth)
- 4) WELL PURPOSE/JUSTIFICATION (attach maps and table if needed):
To determine internal plume characteristics and test for saturated alluvium
to this location.
- 5) PROPOSED DRILLING PARAMETERS:
 - (a) Drilling method(s): (air/foam/mud rotary/auger/etc.)
Mud Rotary from 0 ' to 100 ' (depth)
Air Foam Rotary from 100 ' to TD ' (depth)

Air-foam method: "Quik-Foam" surfactant/water mixture used in conjunction with filtered compress air.

Mud-rotary method: Bentonite mud/water mixture.

BLM 23-431

POINT NAME

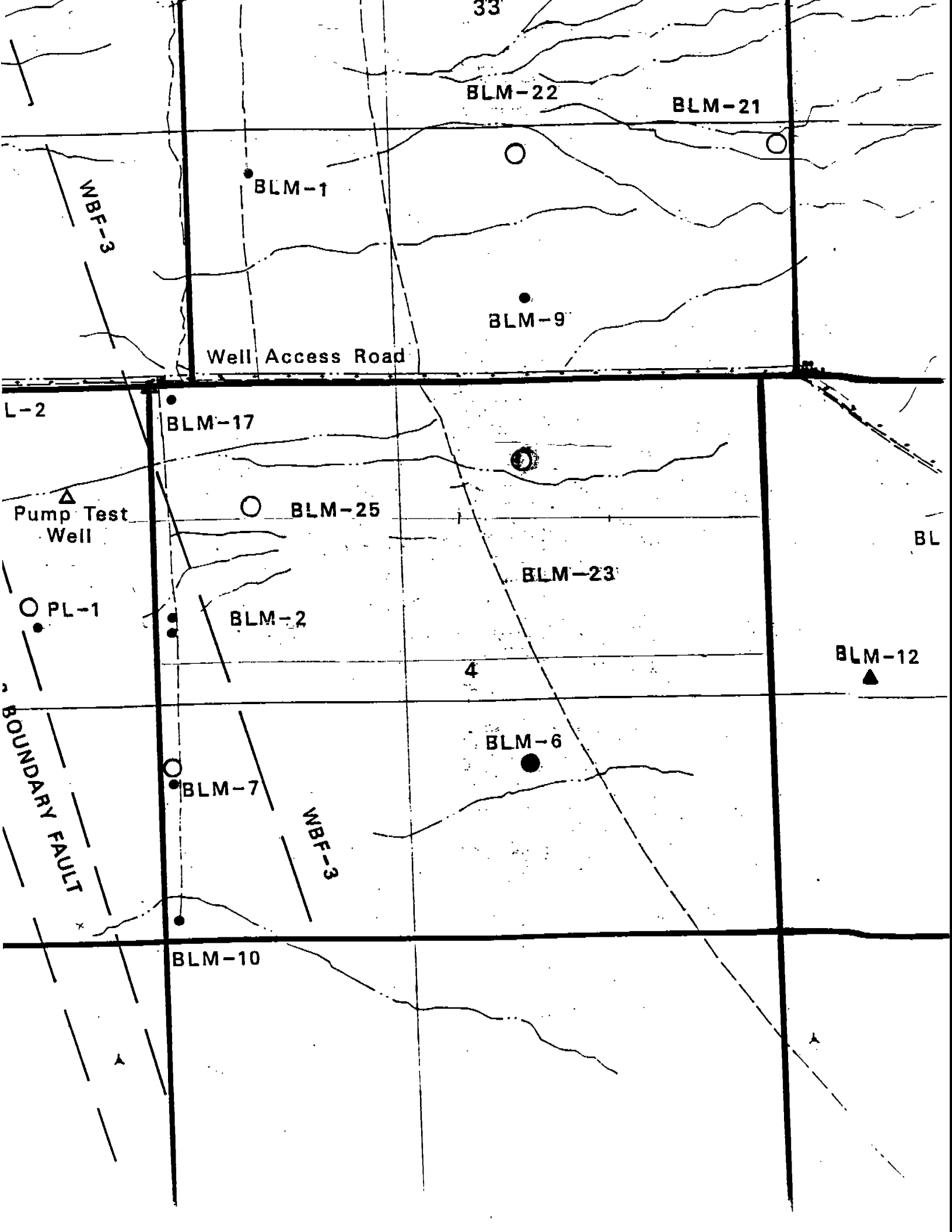


COORD. TYPE	POINT # 454	POINT # 437	POINT # 438	SCALE FACTOR	$\Delta\alpha$
GEODETIC	LAT=32°30'56.396"	LAT=32°30'56.395"	LAT=32°30'56.395"	—	—
	LONG=106°38'18.379"	LONG=106°38'18.366"	LONG=106°38'18.374"	—	—
WSTM COORD.	X=405,945.704	X=405,946.852	X=405,946.173	0.9999851 SCALE	(+) 0°09'50"
	Y=227,100.410	Y=227,100.358	Y=227,100.371	0.9997656 GR10	
NM COORD	X=380,265.56	X=380,266.67	X=380,265.99	0.9999164 SCALE	(-) 0°12'32"
	Y=551,524.83	Y=551,524.72	Y=551,524.73	0.9996969 GR10	

NM COORDINATE ZONE CENTRAL

BOTSFORD LAND SURVEYING, INC.

 212 S. Downtown Mall
 LAS CRUCES, NM 88001
 Phone 526-2444



WELL NAME/NUMBER: BLM-23

(b) Lithology sampling - collect sample every:

5' intervals Method Grab from 0 to TD (depth)
Core type 6" Dennison from _____ to _____ (depth)
2" Christiansen from 470 to 480 (depth)

(c) Anticipated drilling additive(s): E-Z mud

7) PROPOSED WELL COMPLETION DESIGN/MATERIALS

(a)	Casing:	Material	Diameter	From	To	Comments
	Temporary	_____	_____	_____	_____	
	Surface	_____	<u>10"</u>	<u>0</u>	<u>100' max</u>	
	Screen (10')	<u>Stainless ++</u>	<u>4"</u>	<u>To be determined</u>	<u>from Geophysical</u>	<u>0.02"</u>
				<u>logs</u>		
	Completion Pipe	<u>stainless +</u>	<u>4"</u>	<u>0</u>	<u>TD</u>	<u>*</u>

Standard material: Blank riser, silt trap, locking cap

N/A Data not available at this time

* for deep completions (450 feet or more)

** for shallow completions

+ Type 304, Schedule 5 stainless steel
Type 304, Schedule 10 stainless steel

++ Regular strength screen, extra strength screen used below 450 feet

(b) Filter pack: Standard 8/20 and 16/40 sand and bentonite plug(s), grout to surface.

8) PROPOSED WELL DEVELOPMENT


(a) Surge and bail with surge block and bailer.

(b) Pump with submersible pump until parameters stabilize.

9) WELL AUTHORIZATION

(a) Proposed by Geoscience Consultants, Ltd.

(b) Authorized Robert Mitchell NASA
(name) (representing)


(signature)